

REMARKS

Upon entry of the amendments in this paper, claims 1-9 will be pending in the above-identified application. Claim 1 is amended herein. Support for the amendment is detailed in the below remarks. No new matter is entered.

It is respectfully submitted that this paper is fully responsive to the Office action mailed on September 10, 2008.

Claim Rejections - 35 U.S.C. §103

Claims 1-4 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,750,611 to *Trouilhet* in view of U.S. Patent No. 5,167,942 to *Balkus et al.*

In response thereto, applicants respectfully submit that the combination of references does not render the present invention obvious for at least the reasons that the combination does not teach all the features of the now claimed invention, nor is there a basis for one of skill in the art to derive the current invention in light of the teachings of the cited references.

Specifically, the combination of Trouilhet and Balkus at least fails to disclose the features of amended claim 1 that the water-absorbing resin consists of a cross-linked polymer of an acrylic acid salt, and the metal chelating agent is outside of the porous material.

Trouilhet is cited by the Office as being directed to a thermoplastic resin such as ethylene/acid copolymers and ethylene/acid/acrylate terpolymers which are combined with an absorbing agent. In regard to the antibacterial metal and metal chelating agent, the rejection

relies on Balkus as teaching a methods for the preparation of aluminum phosphate molecular sieves and faujasite-type zeolites having stably encapsulated multidentate metal chelate complexes. The rejection maintains that both Trouilhet and Balkus disclose molecular sieves for collecting and trapping fluids which can create bad odors, and concludes that it would be obvious to one of ordinary skill in the art to modify the composition of Trouilhet by replacing the sieve with the molecular sieve disclosed by Balkus. Page 3 of the Office Action.

First, amended claim 1 is directed to water-absorbing resin which consists of a cross-linked polymer of an acrylic acid salt. Hence, the polymer in claim 1 is relatively hydrophilic. See page 4, lines 8-14 of the specification. In this regard, amended claim 1 exclude copolymers such as the ethylene/acrylic acid copolymers of Trouilhet relied upon by the rejection. As noted above Trouilhet requires a copolymer. Specifically, Trouilhet is directed to a thermoplastic resin such as copolymers of ethylene and 2 to 50 % by weight acrylic or methacrylic acid neutralized with an alkali metal ion or a divalent or trivalent metal ion. See col. 2, lines 1-5. The thermoplastic resin of Trouilhet is relatively hydrophobic because the content of ethylene components in the copolymer is 50 % by weight or more. Therefore, this thermoplastic resin is not adequate to use as water-absorbing resin. As such there is no basis for one of skill in the art to modify Trouilhet in a manner contrary to its principle of operation.

Second, claim 1 has been amended to include the feature that the metal chelating agent is outside of the porous material. As noted above the rejection relies on Balkus for its disclosure of a metal chelating agent. However, Balkus is specifically directed to the opposite formation wherein the metal chelating complexes are maintained within the zeolites. The principle of

operation for Balkus's device is that the multidentate metal chelate complexes are formed within the zeolite so as to be trapped therein. Specifically, Balkus is directed to zeolite entrapped metal complexes analogous to the "ship in a bottle" structure wherein the multidentate metal complexes are larger than the pore size of the encapsulating faujasite zeolite. See col. 4, lines 15 to 23. The metal complexes are too large to escape through the pores of the zeolite. See col. 4, lines 15-24. As such, Balkus cannot be directly concerned with trapping of odor.

Contrary, the present invention pursuant to amended claim 1 involves zeolite/metal chelating complexes wherein the metal chelating agent is outside the porous material. As set forth in the Examples of the applicants' specification, the chelating agent is added separately from an antibacterial silver-zeolite agent. Further, as described on page 3, line 24-29 of the specification, the metal chelating agent forms a complex with antibacterial metals eluted from the porous material. For example, the present invention uses a metal chelating agent such as EDTA, DTPA and the porous material such as zeolite. In general, the size of pores in zeolite is 3 to 10 Å and the molecular diameters for EDTA and DTPA are 14.8 Å and 29.4 Å, respectively. Therefore, the metal chelating agents located in the exterior of the porous material do not permeate into the interior of the porous material through thin paths. Therefore, in the present invention, complexes between the chelating agent and the antibacterial metal locate at the exterior of the porous material.

Since Balkus is directed to a very limited porous material and chelating metal structure, one of skill in the art cannot consider Balkus modifiable in a manner which would have chelating metal complexes which are outside of the porous (zeolite) structure. Such a modification clearly

destroys the function and principle of operation of the device of Balkus. Therefore, there is no reason whereby a skilled artisan would modify Balkus so as to derive the present invention pursuant to amended claim 1.

In conclusion, applicants have herein amended claim 1 so as to include features which are outside of the teachings of both cited references, Trouilhet and Balkus. As detailed above, both references would need to be modified in a manner which destroys their function and/or intended principle of operation to develop the currently claimed invention. As such, there is no reason whereby a skilled artisan could derive the present invention based on their combination. Wherefore, applicants respectfully submit that amended parent claim 1 and its respective dependent claims are not obvious under 35 U.S.C. §103.

Claims 5-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Trouilhet* in view of *Balkus et al.* as applied to claim 1 above and further in view of U.S. Patent No. 6,703,451 to *Hosokawa et al.*

Applicants respectfully submit that by addressing the rejection of parent claim 1, as detailed above, likewise the rejections of claims 5-8 are addressed by nature of their dependency.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

Application No.: 10/552,152
Art Unit: 3761


Amendment under 37 C.F.R. §1.111
Attorney Docket No.: 053170

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Michael J. Caridi", is written over the printed name.

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